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(71)(72) Applicant and Inventor: SMITH, Michael, John [NZ/NZ]; Rosebanks Drive, Tamahere, R D 3, Hamilton 2021 (NZ).

(74) Agents: BENNETT, Michael, R. et al.; A. J. Park & Son, 6th floor, Huddart Parker Building, CNR Jervois Quay & Grey Street, P.O. Box 949, Wellington 6015 (NZ).

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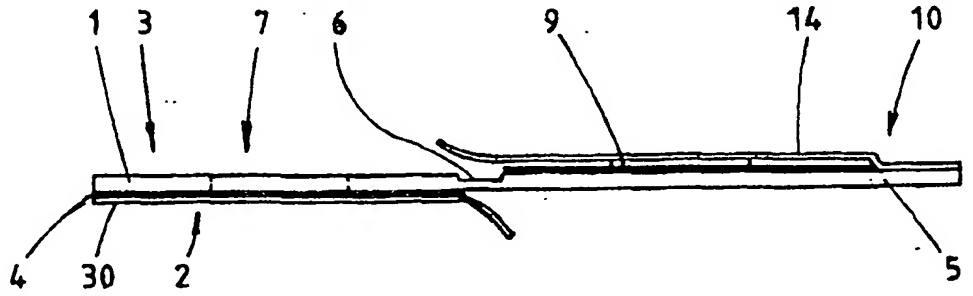

(57) Abstract

The present invention provides a dressing comprising a skin patch (1) and cover flap (5). A portion of the skin patch, which includes an adhesive area for adhering to skin or other surfaces, comprises a region or target zone which is positioned in use about a wound, afflicted region or injection site. Operations such as injections or wound treatment may be made within this region or target zone. After use, the cover flap (5) can be fastened over the skin patch (1) to protect the aforesaid region or target zone.

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IMPROVEMENTS IN AND RELATING TO DRESSINGS

TECHNICAL FIELD

The present invention is directed to the medical and veterinary arena. Typically it will find use as a dressing for use at injection sites to minimise seepage of blood from the site and/or contamination of the injecting apparatus or person. It is also envisaged that variations of the present invention will also be useful for a dressing for wounds and afflicted sites. In some embodiments, minor operations such as lancing, mole removal, incisions etc. may be made with the dressing in place, and the dressing subsequently closed after the preferred operation. It is also envisaged that the present invention may also find use in the scientific field and in especially those areas requiring a septum to reduce backflow of material during the injection of a substance.

BACKGROUND ART

The present invention was developed with the needs of the medical fraternity in mind though this does not limit its use to this area. The risk to health workers from contracting contagious blood relating diseases, such as hepatitis, has always been a consideration but increased concern has undoubtedly arisen since the more recent advent of the HIV virus. Despite the risks, most research into protecting the health worker has centred on the safer disposal of blood contaminated products (such as syringe needles). However, very little, if anything, has been done to protect the health worker during procedures such as the giving of an injection. In fact, the basic procedure remains substantially unchanged; this is typically to inject the patient with a needle, withdraw the needle and then apply a dressing to absorb any blood which may weep from the wound or be withdrawn with the needle. It is very easy, and common, to get blood spilt onto the patient's skin which then becomes a potential source of infection. This then gives rise to the possibility of the person giving the injection contracting a blood born infection.

Injections, and the insertion of cannulas, are not the only operations to be performed which may place users at risk, or where improvements may be made. For instance, minor operations such as the lancing of boils, removal of moles, and cancerous growths, closing minor incisions, are generally performed before a dressing is applied. In some instances it is desirable to clean around the wound or afflicted area before applying a dressing, especially if is of an adhesive type which must maintain good contact with the areas surrounding the wound or afflicted site. In many instances, it would be useful to use a dressing which surrounded a wound or site before any minor operation was performed, and which could be readily cleaned or wiped, and closed.

It is an object of the present invention to address the foregoing problems or at least to provide the public with a useful choice.

Further aspects and advantages of the present invention will become apparent from the ensuing description which is given by way of example only.

DISCLOSURE OF INVENTION

According to one aspect of the present invention there is provided A dressing comprising:

- a skin patch having a top and bottom surface, said bottom surface having an adhesive area;
- a cover flap attached to said skin patch, the attachment allowing the cover flap to be positioned over at least a portion of the top surface of said skin flap;
- said dressing including fastening means for holding the cover flap over the top surface of said skin patch.

According to another aspect of the present invention there is provided a dressing substantially as described above in which the skin patch includes a target zone.

According to another aspect of the present invention there is provided a dressing substantially as described above in which the target zone comprises a portion of the skin patch pierceable by a hypodermic.

According to another aspect of the present invention there is provided a dressing substantially as described above in which there is provided on the skin patch, an absorbent material.

According to another aspect of the present invention there is provided a dressing substantially as described above wherein there is provided an absorbent region on the surface of the cover flap adjacent the top surface of the skin patch when folded over same.

According to a further aspect of the present invention there is provided a method for injecting a needle or cannula, comprising the application of a dressing comprising a target zone so that said target zone covers the targeted injection site, injecting said needle in the target zone, removing said needle, and applying a cover flap to obscure the target zone.

According to yet a further aspect of the present invention there is provided a method for dressing a wound or afflicted site comprising the use of a dressing having a target zone and cover flap, said target zone comprising an aperture of a size commensurate to the wound or afflicted site, applying said dressing so that it substantially does not adhere to

said wound or afflicted site, and subsequently positioning and fastening said cover flap over said skin patch to cover said wound or afflicted site.

According to an even further aspect of the present invention there is provided a method for injecting a needle comprising the use of a dressing comprising a skin patch with target zone, an attached adhesive cover flap positionable to overly sand target zone, and a removable protector for the cover flap permanently affixed to said cover flap distal to its attachment to said skin patch, said method comprising application of said skin patch so the target zone overlies the intended injection site, injecting through the target zone and removing needle, peeling back said removable protector and subsequently positioning said adhesive cover flap over said skin patch, then lifting the cover flap in the region of its permanent fixture to the removable protector to peel said dressing from the injection site.

According to yet another aspect of the present invention there is provided a method for dressing a wound or inflicted site comprising the use of a dressing having a target zone and cover flap, said target zone comprising an aperture of a size commensurate to the wound or afflicted site, applying said dressing so that it substantially does not adhere to said wound or afflicted site, and subsequently positioning and fastening said cover flap over said skin patch to cover said wound or afflicted site substantially as described herein with reference to the accompanying drawings and examples.

The term 'medicated substance' will be used herein. Generally this will comprise any substance for which it is useful to provide in the dressing. Generally, it is envisaged that medicated substances may comprise anti-bacterial, anti-fungal, anti-microbial , anti-viral and sterilising substances. However, other medicated substances may be chosen according to the intended use of a particular embodiment of a dressing. Where a dressing is to find veterinary or other use, then different medicated substances may be relied upon. In other than medical uses of a dressing according to the present invention, an impregnant comprising a substance other than commonly used in medicine may also be relied upon.

Most embodiments of the present invention will find use with (but not necessarily be restricted to) techniques such as injection or aspiration, or generally where a needle or probe like device is, or has been, inserted into a surface or object. Many embodiments will therefore comprise at least a skin patch which is initially applied over the intended injection or target site. In most cases the skin patch must have certain qualities, one of which is that it must be readily penetrable by the intended needle, and is unlikely to cause any needle damage. In some embodiments, the skin patch has a definable target zone or region, this being an area in which it is preferable to insert the needle. Consequently, it

is at least this region which should be penetrable by a needle or probe, and it is less important if portions of the skin patch outside of this zone are penetrable or not.

In some alternative embodiments of the present invention, the target zone in a skin patch may comprise an aperture. This is especially useful where the dressing is to be applied to a wound or afflicted, where it is desirable that the targeted area remains visible.

Apart from being penetrable by the needle, it would also be desirable if the skin patch for many uses of the invention, at least within the aforesaid target zone, was of a material which was able to wipe the needle and thereby act as a shutter to prevent the flow of fluid from one side to the other. A potentially realisable benefit here is during withdrawal of the needle as the use of a suitable material can effectively wipe the blade and prevent the transfer of blood from the injection side to the top face of the cover flap. While the total exclusion of blood or other fluids may not always be totally possible, depending partially upon the nature of the injecting needle and the technique of the injector, the use of a suitable material can certainly minimise such transfers. In such cases the use of a cover flap may not be required, though this will typically depend upon the 'wiping efficiency' of the material in the target site, and user choice.

Typically, materials which can yield as a the needle is passed through the site, and which are resilient enough to substantially close after the needle has been withdrawn, will be suitable. Many natural and synthetic materials which are commonly used, including in the medical and veterinary arena, would be suitable. An example of the one material envisaged for use by the applicant is a medical silicone rubber.

The skin patch is typically a relatively thin film of sufficient size to cover and slightly surround the injection site. Where the dressing is to surround a wound, then substantially larger embodiments will be used. The skin patch can be defined as having a top face, and a bottom face which is generally the face applied to the skin or about the targeted area.

When used for injections, it is generally preferable that the skin patch is held relatively tightly against the skin of the injection site, for in an animal or human the skin patch can act as a second skin and assist in minimise bleeding from the injection site. It would be undesirable that blood or other fluids were able to well up underneath the skin patch, which is generally more likely if there is a void between the skin patch and skin of the injectee. Providing an absorbent material in the target zone, or adjacent the target zone, may partially alleviate this problem. Such absorbent materials may also be provided in instances where the target zone comprises an aperture, to minimise the spread of fluids from the wound or afflicted site (see also below).

Most embodiments of the present invention will rely upon an adhesive for maintaining contact between the skin patch and skin. This will generally be a result of an adhesive portion on the bottom face, which may cover the whole face or, as in the case of a currently preferred embodiment, be arranged in a peripheral border about the preferred target zone (for injection). With the potential problems of blood and fluid welling up under the skin patch in mind, it may be desirable in some instances to minimise the non-adhesive area of the bottom face of the skin patch, or to rely on appropriate technique by the injector to ensure that the skin patch is stretched over the skin and held relatively tightly against same in at least the region of the injection site.

It is almost inevitable in most cases that a certain amount of fluid will leak from the wound created by an injection. While maintaining a second skin, such as a skin patch, against the skin of the injected may help minimise this leakage, further steps may also be adopted to counter this problem. Consequently, in some embodiments, means may be made to deal with such fluid.

One such method is to use an absorbent material, located in the general region of the preferred target zone, which can absorb any blood or fluids leaking from the injection site This absorbent material may be positioned on the bottom and/or top faces of the skin patch. In some embodiments, it may be contained between two layers in the manner of a sandwich. This may have an advantage in that any absorbed material is still relatively shielded from the person performing the injection. However, it may be desirable that any shielding or covering on the bottom face be partially permeable to liquid otherwise any blood or fluid leaking from the injection site may be excluded from the absorbent material. A wide range of absorbent materials suitable for medical and veterinary and other uses are known and may be readily applied to various embodiments of the present invention.

As a further modification, it is possible that any absorbent material can be impregnated with a suitable substance. This may include a medical substance, such as disinfectants, virocides and sterilising substances, to further reduce the possibility of infection from contaminated samples. Absorbent materials which include other substances, such as anaesthetising agents, and which will be picked up by the needle and carried to the injection site, are another consideration in some instances. Various other substances and agents may be included in various embodiments, the absorbent material (which is penetrated by the needle) merely being a convenient vehicle for coating the needle with such substances, and/or addressing any contaminated blood products or fluids discharging from an injection site.

A cover flap for use with the present invention will typically cover at least the target zone of the skin patch. However it is generally preferable that is able to cover the entire top surface of the skin patch, and may in some embodiments extend past the edges thereof. While the cover flap may be a separate piece attachable to the upper face of the skin patch after a needle is withdrawn, most embodiments of the present invention will have the cover flap attached in some manner to the skin patch. In a preferred embodiment, the cover flap could even be described as being an extending portion of the skin patch which can be folded back over the upper face of the skin patch. Various connection means, foldable joins and hinging may be used in various embodiments as possible ways of attaching a cover flap to the skin patch.

In most embodiments, it is desirable that once the cover flap has been positioned over the upper face of the skin patch, it remains in this position. One method of achieving this is to provide adhesive on the contacting face of the cover flap, so that it can adhere to the top face of the skin patch. Adhesive could also be applied to the top face of the skin patch though this may be a nuisance when performing an injection. In some embodiments, complementary adhesives may be used on the two contacting faces, the adhesives being of the type which are not substantially 'tacky on their own but which form a bond when coming into contact with each other. Numerous adhesives of this type are known and used in various applications.

Where an adhesive is provided on the contacting (with the skin patch) face of the cover flap, it may be desirable to provide some form of shielding to protect this adhesive portion during use of the dressing. This may comprise a suitable material which has only limited adhesion to the adhesive surface of the cover flap. Again many such materials are known and may be readily employed in the present invention. However, rather than having a backing piece which is merely removed and discarded, it may be desirable to make use of such a backing piece to help enclose a used dressing.

For instance, the backing piece or flap may be connected to the cover flap in such a manner that after the dressing has been removed and the cover flap is positioned to cover the upper face of the skin patch, the backing flap can be folded to cover the bottom face of said skin patch. The result is a dressing in which both sides of the skin patch which may have been exposed to contaminated products, have been encapsulated and protected from exposure to the environment. In such embodiments, the adhesive on the bottom face of the skin patch may retain sufficient adhesion to help maintain the backing flap in place. Typically the adhesion does not need to be great, as for most uses the backing flap is merely acting as a cover to shield possibly contaminated regions of the skin patch until

the used dressing can be disposed of safely. Consequently a permanent adhesive seal will not always be required.

Where a more secure seal is required, several options are available. As the surface of such a backing flap which covers the bottom face of a skin patch also initially covers and (must be removed from) a possibly adhesive cover flap, care will need to be taken to ensure that the back flap is removable from the cover flap. The use of low tack adhesives is one possibility. Another possibility is the use of complementary types of adhesives where by the backing flap only has low adhesion with the cover flap but has high adhesion with the adhesive of the bottom face of the skin patch.

Another feature which will be present on many embodiments of the present invention is a removable portion to assist in removal of the dressing. Typically this is a portion not being adhesively secured to the skin of the injected site, which can be readily lifted up and used to peel the used dressing away from the skin or surface. This may be an extension of any portion, including the skin patch, cover flap and/or backing flap (where provided).

Embodiments may be made to address manufacturing or dispensing considerations. Embodiments may be manufactured to fill a dispenser of a type in which withdrawing one dressing partially withdraws the next, so that it may be readily taken. Dressings manufactured, or dispensed, in strips are also envisaged.

BRIEF DESCRIPTION OF DRAWINGS

Further aspects of the present invention will become apparent from the ensuing description which is given by way of example only and with reference to the accompanying drawings in which:

Figure 1 is a side diagrammatic view of a preferred embodiment of the present invention,

Figure 2 is a plan diagrammatic view of the embodiments of Figure 1;

Figs 3a-d are a sequence illustrating the removal of an alternative embodiment of the present invention,

Figures 4 are of an alternative embodiment of the present invention

Figure 5 is a perspective diagrammatic view of an alternative embodiment of the present invention,

Figure 6 is a perspective diagrammatic view of an alternative embodiment of the present invention,

Figure 7 is a plan diagrammatic view of an alternative embodiment of the present invention,

Figure 8 is a side diagrammatic view of the embodiment of Figure 7,

Figure 9 is a perspective diagrammatic view of an alternative embodiment of the present invention,

Figure 10 is a perspective diagrammatic view of an alternative embodiment of the present invention,

Figure 11 is a plan diagrammatic view of an alternative embodiment of the present invention,

Figure 12 is a side diagrammatic view of the embodiment of Figure 11,

Figure 13 is a plan diagrammatic view of another embodiment of the present invention,

Figure 14 is a perspective diagrammatic view of an alternative embodiment of the present invention,

Figure 15 is a plan diagrammatic view of an alternative embodiment of the present invention,

Figure 16 is a side diagrammatic view of the embodiment of Figure 15,

Figure 17 is a plan diagrammatic view of an alternative embodiment of the present invention,

Figure 18 is a plan diagrammatic view of a variation of the embodiment of Figure 17,

Figure 19 is a side diagrammatic view of the embodiment of Figure 18.

BEST MODES FOR CARRYING OUT THE INVENTION

EXAMPLE 1

With reference to Figures 1 and 2, there is provided a dressing comprising a skin patch (generally indicated by arrow 1) having a bottom face 2 and an upper face 3, a portion 4 of said bottom face 2 being adhesive, and a cover flap (generally indicated by arrow 5) which may be applied to and held over said upper face 3 of said skin patch 1.

In Figures 1 and 2, the skin patch 1 and cover flap 5 are made of a thin film, of approximately 1-2 mm thickness, of a medical grade silicone material. Other materials, such as used on adhesive dressings, may also be used. There is a hinge 6 separating and connecting the skin patch 1 and cover flap 5. The hinged portion merely comprises a portion of decreased thickness to enable the material to be more flexible along this line.

To the bottom face 2 of the skin patch 1 has a peripheral adhesive border 4, with the non-adhesive portion 7 being the target zone. A protective cover 30 is provided.

To the top face 8 of cover flap 5 has an adhesive portion 9 enabling it to adhere to the upper face 3 of the skin patch 1 when folded thereover.

At the end of cover flap 5 distal to the hinge 6 is a removal portion 10 which is essentially an extension of the cover flap 5. This portion 10 is substantially void of any adhesive and will extend past the end of the skin patch 1 (i.e. the end of the skin patch opposite the hinge 6) so that it may act as a peel off tab for removing the closed dressing. Ideally, for this type of embodiment, the adhesion between the folded cover flap 5 and skin patch 1 should exceed the adhesive bond between the bottom 2 and skin patch 1 and any skin to which it is applied. As the dressing, when used for injections, is relatively temporary, a low tack adhesive 4 will typically serve for the bottom 2 of skin patch 1.

As a further variation, the removal portion 10 could also comprise a folded portion comprising the skin patch 1 and cover flap 5. By viewing Figure 1 it can be seen that the hinge 6 could be slightly shifted to the right hand side so that a portion of the skin patch 1 was void of adhesive. When the cover flap 5 is closed over the skin patch 1, this folded over portion adjacent the hinge 6 can be used as the tab for peeling off the used dressing. In some respects, this embodiment may be superior as it removes many considerations regarding the choice of adhesive (4, 9) to hold the cover flap in place.

An alternative embodiment of the present invention is illustrated in the sequence of Figures 3. In this embodiment, the skin patch 1, in the enlarged view, is seen to comprise a base layer 11 with a top layer 12 sandwiching an absorbent material 13 therebetween. The absorbent material may be impregnated with a disinfecting, or antibacterial or other medicated substance. This may be impregnated into the dressing and/or applied at the time of use.

In the embodiment of Figures 3, there is also provided a backing flap 14 which during use (refer Figure 3a) sits over the cover flap 5 and protects the adhesive 9.

When folding the cover flap 5 over the skin patch 1, the backing flap 14 is merely held back out of the way, as is evident in Figure 3B.

The removal portion 10 is then used to lift up and peel away the used dressing 15 in the normal way but as can be seen in Figure 3C, the backing flap is allowed to drape over the bottom face 2 of skin patch 1.

When completely removed, the result is a used dressing 15 having the configuration shown in Figure 3D, where it can be seen that all surfaces possibly contaminated by blood are securely protected or shielded.

As a modification, the cover flap 5 and backing flap 14 may extend past the edges of the skin patch 1. If these extending portions contain an adhesive (typically removable for multiple use and noting that for this particular embodiment the backing flap 14 initially comes positioned against the cover flap 5) then a seal can be provided between the cover flap and backing flap to substantially contain the enclosed skin patch 1.

EXAMPLE 2

Figure 5 illustrates an alternative embodiment of a dressing. In figure 5 an opening 15, rather than an enclosed aperture, is provided on the skin patch 1. This opening extends inwardly to include the target zone 7.

The cover flap 5 is integral with the skin patch 1, being formed of a single piece of material and separated in area by a fold 16. A hinge 6 reinforces the fold seam 16.

Adhesive (not visible) is provided on the surface of the cover flap 5 which obscures the top surface of the skin patch 1 when the cover flap 5 is folded thereover. A peel-off protector 17 is illustrated which can be removed through use of the extending tab 18.

Adhesive is generally present on the bottom surface of the skin patch 1 to allow the dressing to adhere to skin. A removable protector 19 is provided to protect the bottom adhesive layer until use.

It is envisaged that this type of embodiment may be used not only for use in conjunction with injections but also for wounds and afflicted sites. The nature of the opening makes it suitable for positioning the skin patch about wounds, and especially elongated wounds such as cuts. This would allow the skin patch to be placed around the wound or afflicted site, any treatment performed (e.g. applying stitches, lancing etc.) and the cover flap applied to close the area of the wound.

An option in these embodiments is to extend the length of cover flap 5 so that it extends past the non-hinged end of the skin patch when folded over same. This extending portion may be adhesively coated to allow that portion of the cover flap to bond to areas of skin, etc. that it overlies.

EXAMPLE 3

Figure 6 illustrates a further embodiment of the present invention. Figure 6 illustrates a circular type embodiment. However, it is noted that this embodiment could just as readily be rectangular or any other shape. Similarly, any of the other embodiments described herein may also be of configurations other than rectangular.

Figure 6 illustrates a dressing in which the target zone 7 of the skin patch 1 is an enclosed aperture. Surrounding the target zone 7 is an area of absorbent material 20. This absorbent material, typically comprising a sterile gauze or other medically acceptable material, may be impregnated with a medicated substance, as previously defined.

The cover flap 5 is commensurate in shape to the skin patch 1 and includes a tab portion 21 to assist in the eventual removal of the dressing from a surface to which it is applied. To enable the cover flap 5 to be held over the skin patch 1 when closing the dressing, an adhesive region 22 is provided. This is generally a permanent adhesive and will form a stronger bond with the top surface of the skin patch 1 than the skin patch 1 will form with skin or a surface to which it is applied. This facilitates removal of the dressing by use of tab 21.

It is noted that other fastening means than the permanent adhesive 22 could be relied upon in the illustrated embodiment. Fastening means such as illustrated in other embodiments herein could also be applied.

Figure 7 illustrates a variation of the embodiment of Figure 6. Here an aperture is provided for the target zone 7 though no absorbent material around its periphery is provided. A cover flap 5 is provided for the skin patch 1 and a tab 21 is provided on the cover piece 5.

Figure 8 illustrates a slight variation of Figure 7. The variation is that the tab 21 is, in this embodiment, provided on the skin patch 1 rather than the cover flap 5 as illustrated in Figure 7. Otherwise, Figure 8 could be a side cross-sectional view of the embodiment of Figure 7.

The skin patch 1 and cover flap 5 are formed from a single piece of material, the skin patch having an aperture 7 cut or formed into it as the target zone. Adhesive 4 is provided on the bottom surface of the skin patch 1 about the target zone 7. A non-adhesive tab portion 21 is provided for subsequent removal of the dressing.

A protective backing 30 protects adhesive 4 on the skin patch 1. Similarly, a protective backing 31 protects the adhesive 9 layer on the top surface of the cover flap 5. The peel-

off backing 31 need not obscure the skin patch 1 to the extent shown in Figure 8. In alternative embodiments, the protective cover 31 may extend only a short portion past the end of the adhesive 9 on the cover flap 5. This would help prevent it obscuring the target zone 7 and the skin patch (though an aperture or gap in the protective cover flap 31 could be provided to expose the target zone 7) or the protective layer 31 could have a crease so that the free portion is folded and rests over the cover flap 5 in the unapplied dressing.

EXAMPLE 4

Figure 9 illustrates yet a further embodiment of the present invention. In this embodiment the skin patch 1 is formed of a pierceable material. This allows a needle or cannula to be pierced through the target zone 7 into an intended injection site. As a modification to this illustrated embodiment, the target zone 7 could comprise a material capable of substantially resealing itself after being pierced. Such embodiments would typically be used for instances where multiple injections over a period of time were to be performed in the same site. By way of example, the target zone could comprise a region of an elastomeric material, a medical grade silicone rubber, or a septum.

The embodiment of Figure 9 is further characterised in that the fastening means for holding the cover flap 5 over the skin patch 1 requires on an interaction between areas (23, 24) on both the skin patch 1 and cover flap 5. These areas may interact in a number of manners. For instance, they could interact to form a substantially permanent bond. Examples of such an arrangement are the adhesive materials used for self-sealing envelopes, and variations thereof. Each portion, in its own right, is substantially non-adhesive and may only be slightly tacky. However, when brought into contact, they form a reasonable bond. Such an embodiment may be useful in that protective covers for the adhesive regions may not be necessary. However, care may be needed in the storage and dispensing of the items to ensure that they did not come into contact until required. Preparing and restoring the dressing substantially flat would be one envisaged method.

Other variations for the embodiment of Figure 9 exist. For instance, the interaction between areas 23 and 24 could be such as to provide a non-permanent bond. This would allow the cover flap 5 to be peeled back using the tab 21 to regain access to the target zone 7. Where the dressing is to be used on wound or afflicted site, then the target zone could comprise an aperture. Preferably, for non-permanent embodiments, the cover flap 5 would be refastenable over the skin patch 1. This would allow repeated access to the target zone for the inspection of wounds, insertion of intravenous needles and cannulas, etc.

A variety of refastenable means may be relied upon. For instance, some contact adhesives are only semi-permanent and may be refastened once separated. Many known adhesives would allow multiple re-use though in many cases there is a practical limit as to the number of times a dressing may wish to be re-examined and sealed rather than changed.

An alternative arrangement for a resealable type embodiment is the use of a mechanical fastening. Typically this will be something which relies on the physical interaction between the skin patch 1 and cover flap 5. Miniature hook and pile fasteners, such as the type marketed under the trade mark VELCRO®, could be relied upon though it is envisaged that this would be more suitable for larger embodiments of a dressing. Other mechanical type arrangements could include magnetic interactions. Many substantially thin and/or flexible magnetic substances are known and could be readily used in embodiments of the present invention.

Where resealable cover flaps 5 are provided for, though also including more permanent arrangements, a relatively permanent adhesive will generally be relied upon to secure the skin patch 1 to skin or other surfaces to which the dressing is applied. Typically a protective cover will be provided for this adhesive layer, even if no such protective cover is provided for areas 23 and 24 of the alternate side of the dressing.

EXAMPLE 5

Figure 10 illustrates a further embodiment of the present invention. Here the target zone 7 of the skin patch 1 comprises a region of a pierceable material such as medical grade silicon, etc. Surrounding the target zone 7 is a peripheral area 25 of an absorbent material. This absorbent material 25 may be impregnated with medicated substance such as previously described herein. The cover flap 5 is larger in area than the skin patch 1 and the peripheral area 26 is coated with an adhesive. Consequently when the protective cover (not shown) for clarity) has been removed from adhesive 26, the cover flap 5 may be folded over the skin patch 1 and the adhesive 26 will adhere to the skin (to which the dressing has been applied), immediately bordering the skin patch 1.

Figure 11 illustrates a variation of the embodiment of Figure 8. In Figure 11, the target zone 7 comprises an aperture. A non-adhesive tab 21 is provided for subsequent removal of an applied dressing.

A large absorbent pad 28 is provided on the cover flap 5, and in the illustrated embodiment, the pad is larger in size than the target zone 7. It is envisaged that the embodiment of Figure 11 will typically be used for intravenous or intra-arterial blood

sampling, injections, catheter insertion etc., where blood spillage is probable. The large size of the absorbent pad 28 caters for the larger amount or area of fluid spillage which may occur in such cases.

Figure 12 is a side cross-sectional diagram of the embodiment of Figure 11. The peripheral adhesive 4 about the target zone of the skin patch 1 is visible, as is its protective cover 30. The adhesive 9 for the cover flap 5 is also shown, and extends about the periphery of the absorbent material 28. A protective cover 31 is provided for the adhesive 9. In Figure 12, the adhesive portion 4 will be applied to the patient or surface.

Figure 13 is a variation which is again suitable for intravenous or intra-arterial blood sampling, an injection, or for use at catheter sites, etc. The main difference with the embodiment of Figure 11 is that a split 32 is provided in the cover flap 5 to allow for a tube or cannula to protrude from an applied dressing. In practice, the skin patch 1 will be applied to the patient or surface, and a cannula etc. inserted into the patient in the target zone 7. Typically the free end of the cannula will protrude from a patient. Cover flap 5 will be folded over the site allowing the free end of the cannula to pass through and protrude from the other side of the split 32. The free end of the cannula may then be connected as appropriate to an intravenous drip, tubing etc.

The cover flap 5 may be reinforced in the region of the slit 32. An elastomeric material may be provided in this region to help seal the cover flap around any protruding catheter, cannula, etc. Apertures of a similar shape to the cannula etc., with which the dressing will be used, will also be performed in lieu of a slit. This may give better sealing, where required, about a protruding cannula.

As a further variation, no split or aperture may be provided, though a preformed flap or aperture which may be readily opened or pushed through could be relied upon. The use of perforations to enable the designated portion to be pushed open or out may be relied upon. Even for the embodiment of Figure 13, the slit 32 may merely comprise a number of perforations in a line, so that a slit may be readily formed. A variety of punch out apertures of varying shapes and sizes may be provided to allow a user to choose the shape and size most appropriate for the protruding cannula etc.

EXAMPLE 6

Figure 14 illustrates yet a further embodiment of the present invention. The skin patch 1 includes an aperture for the target zone 7. The embodiment of Figure 14 differs from many of the previous embodiments in that the fastening means for holding the cover flap over the skin patch 1 comprises an area of adhesive 27 on the skin patch 1 rather than the

cover flap 5. A protective cover (not illustrated for clarity) is generally provided to protect the adhesive 27. The protective cover will typically also have an aperture in the area of the target zone so that it need not be removed until ready to close the cover flap 5 over the skin patch 1. An absorbent material 28 is provided on the cover flap 5. This absorbent material 28 corresponds in position to the target zone when the cover flap is folded over same. This absorbent material may be impregnated with a medicated substance as previously described.

EXAMPLE 7

The present invention may be used in a variety of ways. Figures 3 illustrated one method of use for a particular embodiment of the present invention. Several variations in the method of use of the present invention will now be described, but it should be appreciated that this is by way of example only and the examples do not provide an exhaustive review of all the possible methods of use.

According to one method, for injecting a method or cannula, a dressing is applied in a manner so that its target zone or equivalent portion covers the targeted injection site. The needle or cannula is then inserted into the site and after use a cover flap is positioned and held over the target zone. While a two piece dressing could be relied upon, the use of a single piece dressing is generally preferred. Embodiments such as illustrated in Figures 1, 9, and 10 are preferably used, though the embodiments such as illustrated in Figures 5, 6 and 14 may also be used. It is envisaged that the embodiments of Figures 5, 6 and 14 may be desirable where a cannula is to be repeatably inserted. The embodiment of Figure 5 could be useful where an intravenous insertion is made into a patent, with a cover flap 5 helping to hold the tube and insert in position.

In some instances, the area may be swabbed before the needle is injected. This may be desirable if the sterility of the dressing cannot be guaranteed, or where a needle or cannula is being reinserted into an existing dressing. The use of an absorbent material, either in the skin patch or cover flap, perhaps containing a medicated substance to help maintain the sterility of the target zone, may also be considered.

EXAMPLE 8

Another method according to the present invention is for dressing a wound or afflicted site. Typically this comprises the use of a dressing having a target zone and cover flap with the target zone having an aperture or opening of a size commensurate to the wound or afflicted site. Particular embodiments which have been described herein are those illustrated in Figures 5, 6, 11-16 and 18-19 However, variations of the other illustrated embodiments which employ apertures may also be relied upon.

The dressing is generally applied so that it surrounds but does not adhere to the wound or afflicted site. After any treatment, operation or inspection, the cover flap is positioned and held over the target zone to cover the wound or afflicted site.

Embodiments in which the cover flap is removably fastened to cover the target zone may find use where the wound or afflicted site is to be periodically treated or inspected. The use of an absorbent material in the dressing may also be useful in gathering any seepage from the wound or afflicted area. This may be provided on the skin patch of the dressing, though in some instances may be provided on the cover flap such as illustrated in Figure 9. The absorbent portions may be impregnated with a medicated substance.

Figures 15 and 16 illustrate variations of the embodiment of Figure 14. In Figure 15, the adhesive 9 to hold the cover flap in place is provided on the cover flap 5. A pad 28 of absorbent material is also provided on the cover flap 5 and is of a similar area as the aperture of the target zone 7. A protective cover 31 is provided for adhesive portions 9 surrounding the absorbent pad 28.

Adhesive 4 is also provided on the underside of the skin patch 1, except for the non-adhesive removal tab 21, and this adhesive area 4 is also protected by a cover 30.

EXAMPLE 9

Figure 17 illustrates a thin film envisaged for spinal injections. In this embodiment, the target zone 7 comprises either a material of a different type to the remainder of the skin patch 1, or alternatively the same material as the skin patch 1. In the embodiment of Figure 17, the target zone 7 is merely a designated portion of the film of the skin patch 1, and has been delineated by a target zone marker 33 which is merely a printed ring on the surface of the skin patch 1.

As the embodiment of Figure 17 does not provide an aperture, adhesive may be provided on the entire surface of the cover flap 5 which will be folded over skin patch 1. Adhesive could be limited to the periphery of the surface of cover flap 5.

Figure 18 illustrates a variation of Figure 17 in that an absorbent material 28 has been provided on the adjacent surface of cover flap 5. Furthermore, the target zone 7 comprises an aperture rather than a film or layer of window material.

Figure 19 is a side cross-sectional view of the embodiment of Figure 18, which is similar to the embodiment of Figure 17. The absorbent material 28, adhesive area 4, 9 and protective covers 30, 31 are clearly visible.

A number of various embodiments of the present invention have been described by way of example only. Each embodiment contains particular features or combinations of features which differentiated from the others. However it should be appreciated that features present on one or more of the various described embodiments, could also be made available on the other embodiments. Accordingly the description is a selection of possible combinations of features and do not represent an exhaustive review of all possible combinations and variations. It is envisaged that a skilled addressee of the art, in light of the description given herein and common general knowledge would be able to readily arrive at the other envisaged variations.

It is also envisaged that variations of the invention may comprise separate skin patch and cover flaps, which are applied separately rather than being hinged or otherwise connected. However it is envisaged that such combinations will not generally be as effective, or more time consuming, for many applications and are therefore, envisaged but less favoured.

Many of the examples described herein could be multiple piece systems if the cover flap 5 was separated from the skin patch 1. Consequently, further drawings and description of the two-piece arrangement will not be provided.

Aspects of the present invention have been described by way of example only and it should be appreciated that modifications and additions may be made thereto without departing from the scope thereof as defined in the appended claims.

THE CLAIMS DEFINING THE INVENTION ARE:

1. A dressing comprising:
   - a skin patch having a top and bottom surface, said bottom surface having an adhesive area;
   - a cover flap attached to said skin patch, the attachment allowing the cover flap to be positioned over at least a portion of the top surface of said skin flap;
   - said dressing including fastening means for holding the cover flap over the top surface of said skin patch.

2. A dressing as claimed in claim 1 wherein the adhesive of the bottom surface of the skin patch is a permanent-type adhesive.

3. A dressing as claimed in either claim 1 or claim 2 which includes a removable adhesive protector covering the adhesive region of the bottom surface of said skin patch.

4. A dressing as claimed in any one of the preceding claims wherein the skin patch includes a non-adhesive tab to aid removal of an applied dressing.

5. A dressing as claimed in any one of the preceding claims wherein the cover flap is attached to said skin patch by at least one of a hinge, fold, and seam.

6. A dressing as claimed in any one of the preceding claims wherein the cover flap and skin patch are an integral unit, with a fold line dividing the cover flap from the skin patch.

7. A dressing as claimed in any one of the preceding claims wherein the cover flap, when held over said skin patch, extends past an edge of the skin patch to cover part of a surface to which said dressing is applied, the extending portion of the cover flap including an adhesive which adheres to said surface to which the dressing is applied.

8. A dressing as claimed in any one of the preceding claims wherein the fastening means of the dressing comprises regions on the top surface of the skin patch, and on the adjacent surface of the cover flap when held over the skin patch, which interact to form a bond.

9. A dressing as claimed in claim 8 in which the bond created by said fastening means is removable.

10. A dressing as claimed in claim 9 in which the fastening means is refastenable.

11. A dressing as claimed in either claim 9 or claim 10 which comprises a mechanical fastening system.

12. A dressing as claimed in any one of the preceding claims which includes a removable protector on the surface of the cover flap to be positioned over the top surface of said skin patch.

13. A dressing as claimed in claim 12 wherein a portion of the removable protector of the cover flap is permanently fastened to the cover flap distal to the cover flap's attachment to the skin patch.

14. A dressing as claimed in any one of the preceding claims wherein the bond of the fastening means holding the cover flap over the top surface of said skin patch, exceeds the bond of the skin patch to skin.

15. A dressing as claimed in any one of the preceding claims in which the skin patch includes a target zone.

16. A dressing as claimed in claim 15 in which the target zone comprises a portion of the skin patch pierceable by a hypodermic needle or cannula.

17. A dressing as claimed in claim 16 wherein the target zone comprises an elastomeric material.

18. A dressing as claimed in claim 16 wherein the target zone comprises a medical grade silicon.

19. A dressing as claimed in any one of the claims 15 through 18 in which the target zone includes an absorbent material.

20. A dressing as claimed in any one of claims 15 through 19 in which there is provided on the skin patch, adjacent the target zone, an absorbent material.

21. A dressing as claimed in either claim 19 or claim 20 in which said absorbent material is impregnated with a medicated substance.

22. A dressing as claimed in any one of claims 15 through 21 wherein the target zone includes an aperture or opening in the skin patch.

23. A dressing as claimed in any one of claims 15 through 22 wherein there is substantially no adhesive on the bottom surface of the skin patch in the region of the target zone.

24. A dressing as claimed in any one of the preceding claims wherein there is provided an absorbent region on the surface of the cover flap adjacent the top surface of the skin patch when folded over same.

25. A dressing as claimed in any one of claims 15 through 24 which includes an absorbent region positioned to overlie the target zone of the skin patch when said cover flap is positioned over the skin patch.

26. A dressing as claimed in any one of claims 15 through 20 in which the fastening means of the dressing comprises an adhesive, provided on the surface of said cover flap adjacent the top surface of the skin patch when the cover flap is over same, said adhesive being not present in the area of said cover flap which overlies said target zone.

27. A dressing as claimed in claim 26 wherein said adhesive is distributed about substantially the border of said cover flap.

28. A dressing as claimed in any one of claims 1 through 14 wherein the fastening means of the dressing comprises an area of adhesive on the surface of said cover flap adjacent the top surface of the skin patch when said cover flap is over same.

29. A dressing as claimed in any one of the preceding claims in which an aperture, or means for creating an aperture, for a cannula is provided in the cover flap.

30. A method for injecting a needle or cannula, comprising the application of a dressing comprising a target zone so that said target zone covers the targeted injection site, injecting said needle in the target zone, removing said needle, and applying a cover flap to obscure the target zone.

31. A method as claimed in claim 30 in which the dressing is subsequently removed substantially immediately after injection.

32. A method as claimed in either claim 30 or claim 31 in which the cover flap of said dressing includes an absorbent material.

33. A method as in any one of claims 30 through 32 in which the target zone comprises an aperture or opening in said dressing.

34. A method as claimed in any of claims 30 through 33 in which the target zone is swabbed before injection.

35. A method as claimed in claims 30 which uses a dressing as claimed in any one of claims 1 through 29.

36. A method for dressing a wound or afflicted site comprising the use of a dressing having a target zone and cover flap, said target zone comprising an aperture of a size commensurate to the wound or afflicted site, applying said dressing so that it substantially does not adhere to said wound or afflicted site, and subsequently positioning and fastening said cover flap over said skin patch to cover said wound or afflicted site.

37. A method as claimed in claim 36 in which said cover flap is removably fastened over said skin patch.

38. A method as claimed in either claim 36 or claim 37 in which the cover flap includes an absorbent material covering the target zone.

39. A method as claimed in claim 38 in which the absorbent portion is impregnated with a medicated substance.

40. A method as claimed in any of claim 36 comprising the use of a dressing as claimed in any one of claims 1 through 29.

41. A method for injecting a needle comprising the use of a dressing comprising a skin patch with target zone, an attached adhesive cover flap positionable to overlie said target zone, and a removable protector for the cover flap permanently affixed to said cover flap distal to its attachment to said skin patch, said method comprising application of said skin patch so the target zone overlies the intended injection site, injecting through the target zone and removing needle, peeling back said removable protector and subsequently positioning said adhesive cover flap over said skin patch, then lifting the cover flap in the region of its permanent fixture to the removable protector to peel said dressing from the injection site.

42. A method as claimed in claim 41 with reference to figures 3.

43. A dressing, substantially as described herein with reference to the accompanying drawings and examples.

44. A method for injecting a needle, comprising the application of a dressing comprising a target zone so that said target zone covers the targeted injection site, injecting said needle in the target zone, removing said needle, and applying a cover flap to obscure the target zone substantially as described herein with reference to the accompanying drawings and examples.

45. A method for dressing a wound or inflicted site comprising the use of a dressing having a target zone and cover flap, said target zone comprising an aperture of a size commensurate to the wound or afflicted site, applying said dressing so that it substantially does not adhere to said wound or afflicted site, and subsequently positioning and fastening said cover flap over said skin patch to cover said wound or afflicted site substantially as described herein with reference to the accompanying drawings and examples.

46. A dressing comprising a combination of a skin patch with a cover piece, said skin patch having a top and bottom surface, said bottom surface having an adhesive area; said skin patch having a target zone comprising an aperture or opening, or pierceable by a needle or cannula; said cover flap being positionable over to obscure said target zone and including fastening means to maintain it in position over said target zone.

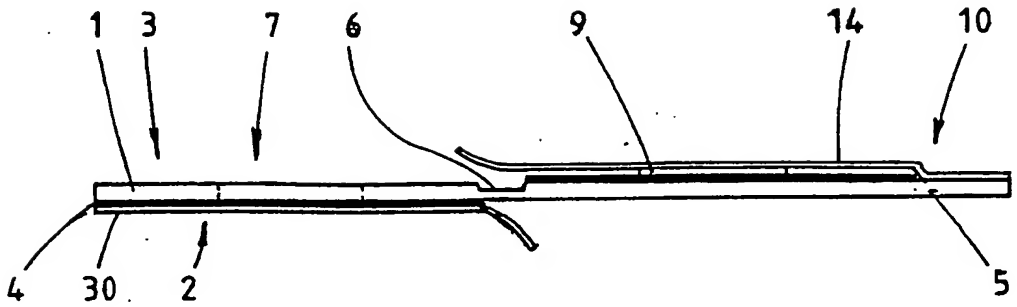

Figure 1

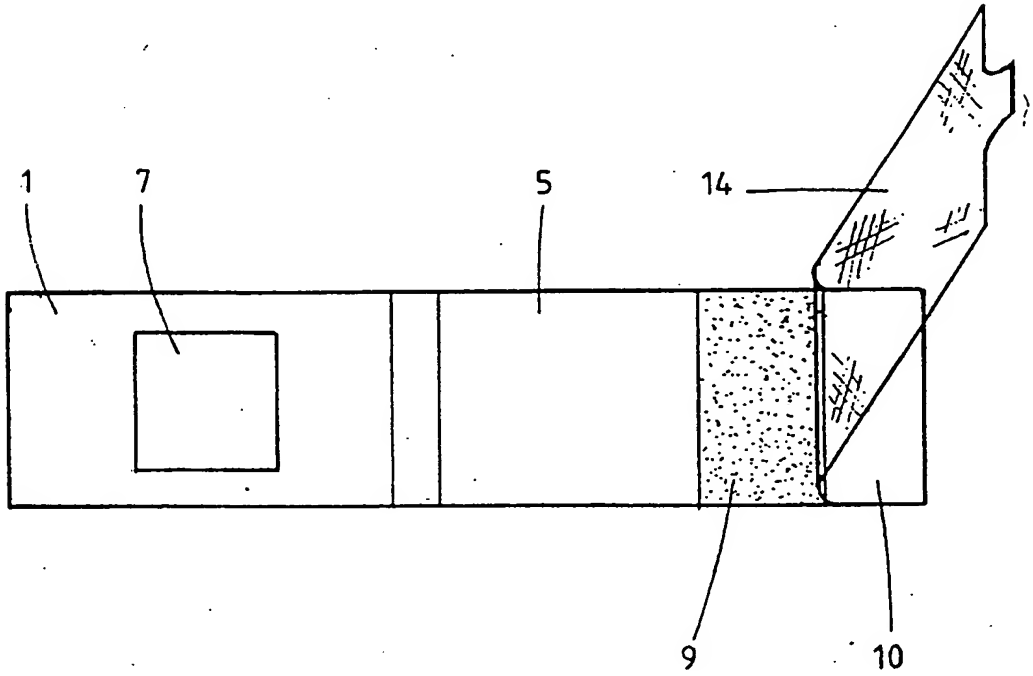

Figure 2

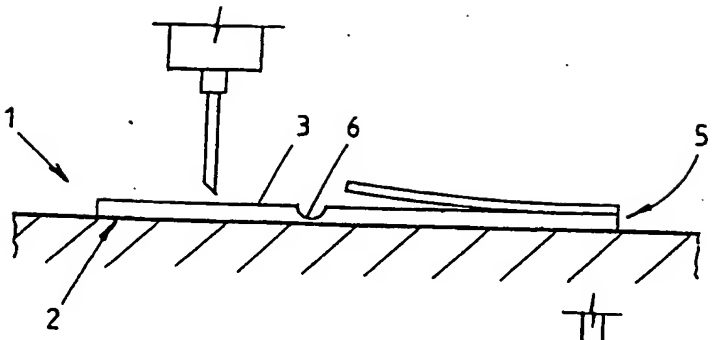

FIG. 3a.

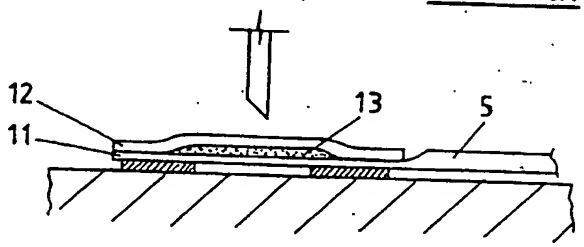

FIG. 4.

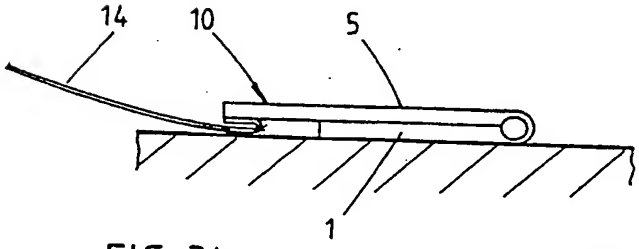

FIG. 3b.

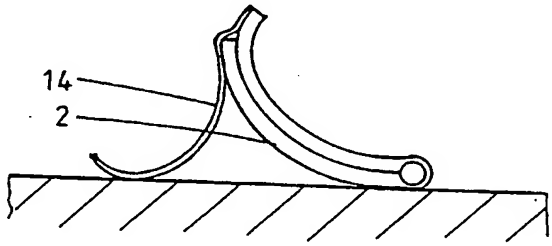

FIG. 3c.

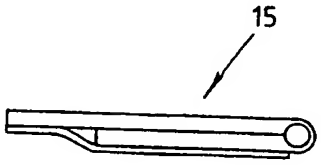

FIG. 3d.

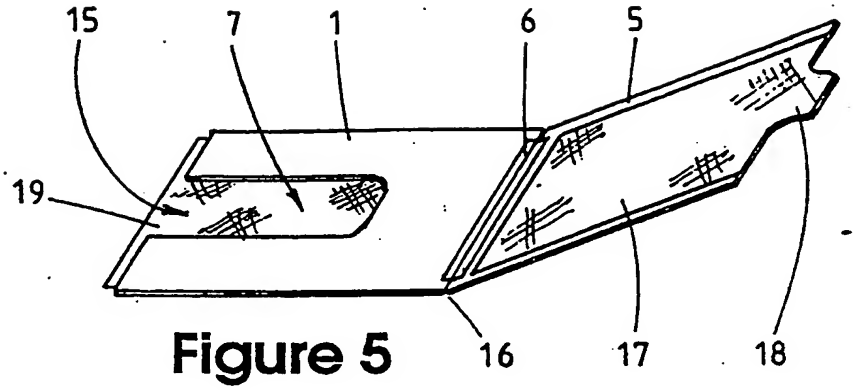

Figure 5

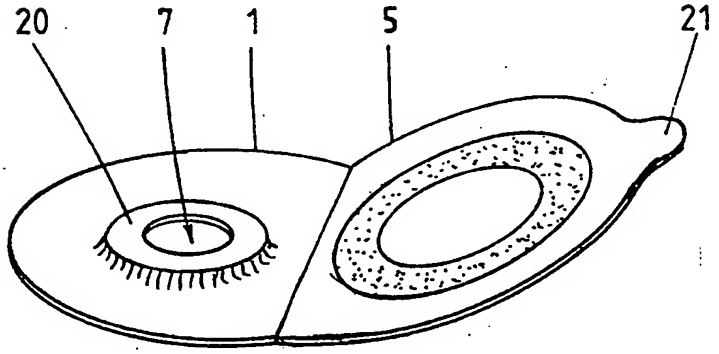

Figure 6

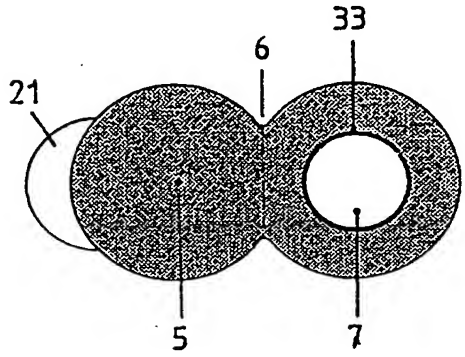

Figure 7

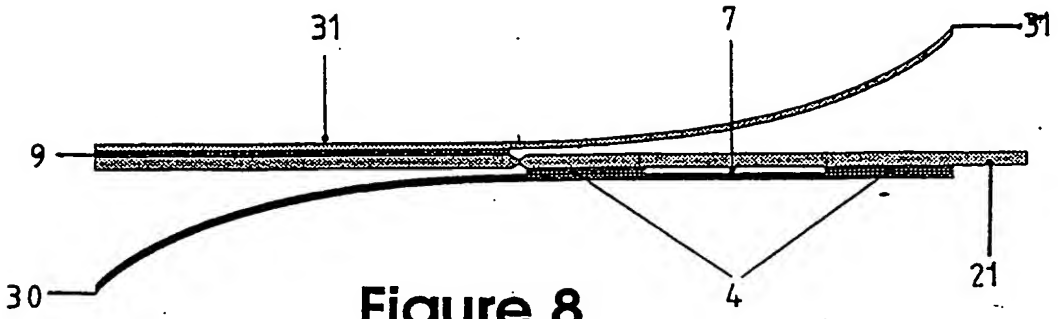

Figure 8

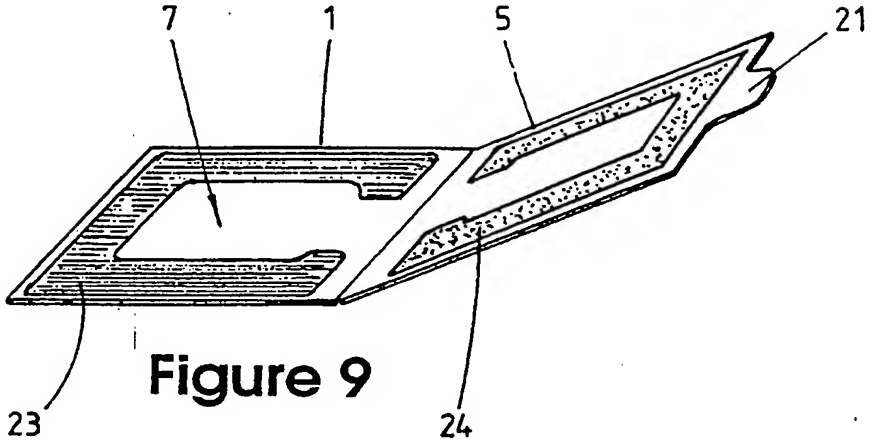

Figure 9

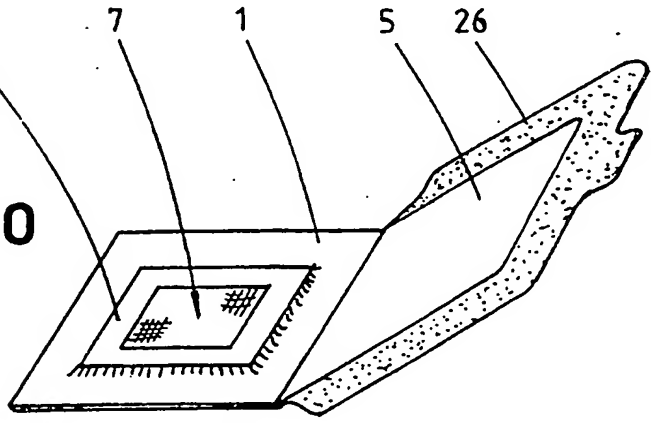

Figure 10

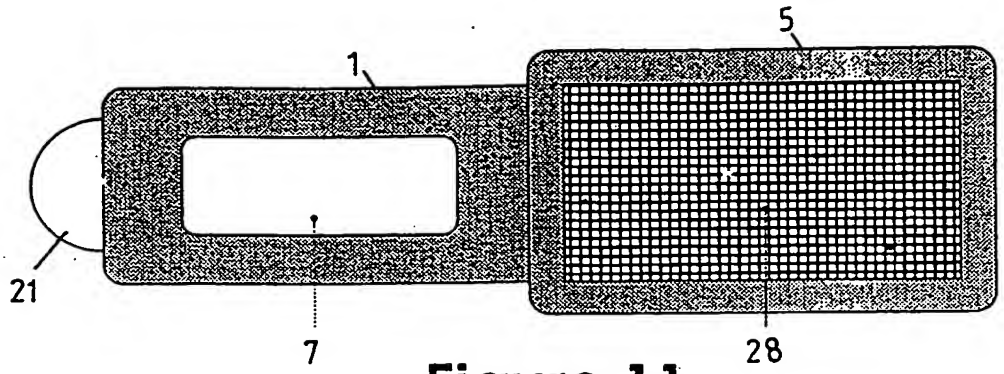

Figure 11

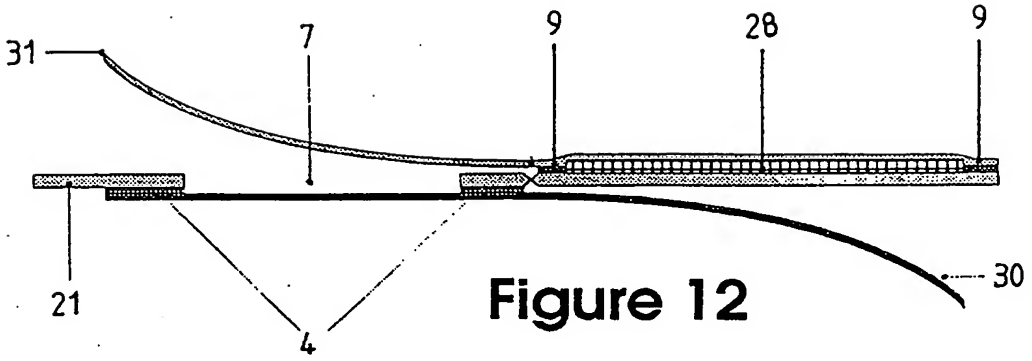

Figure 12

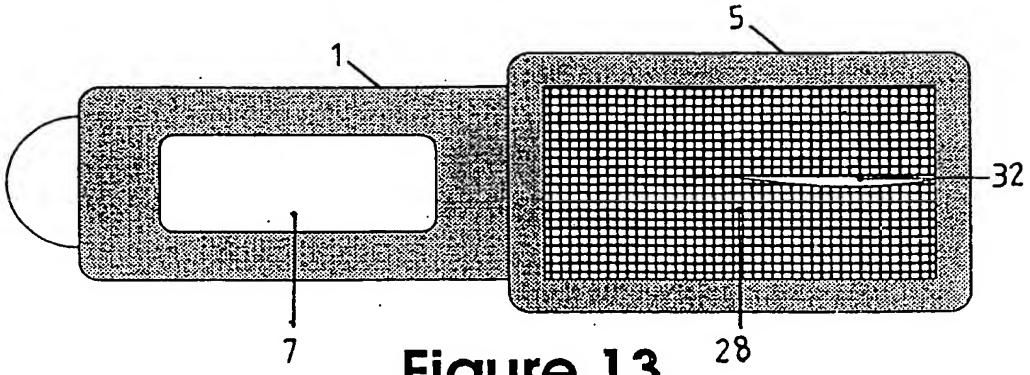

Figure 13

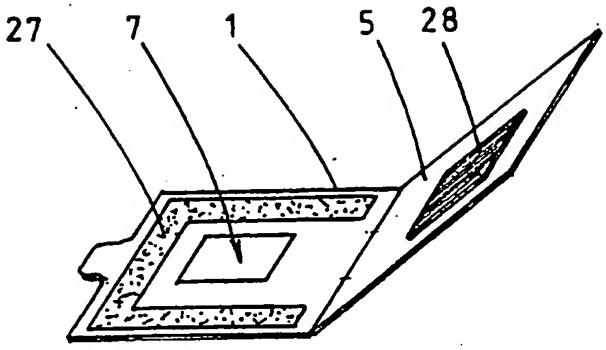

Figure 14

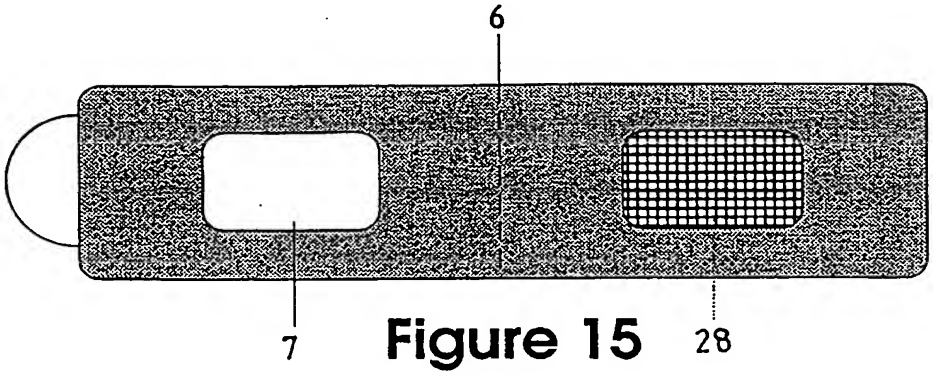

Figure 15

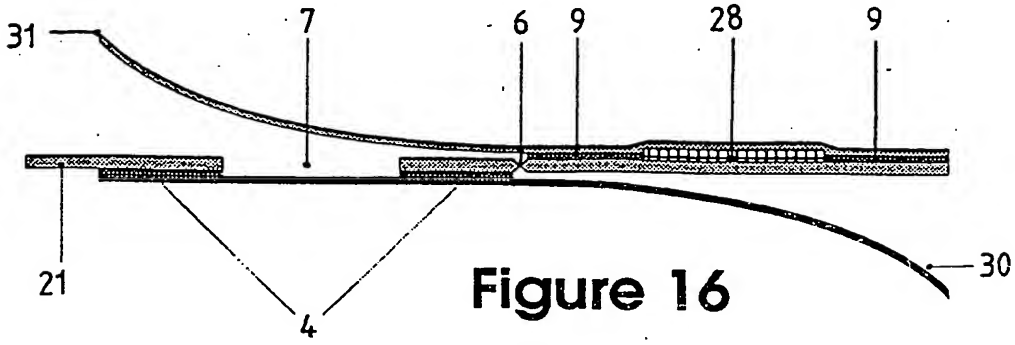

Figure 16

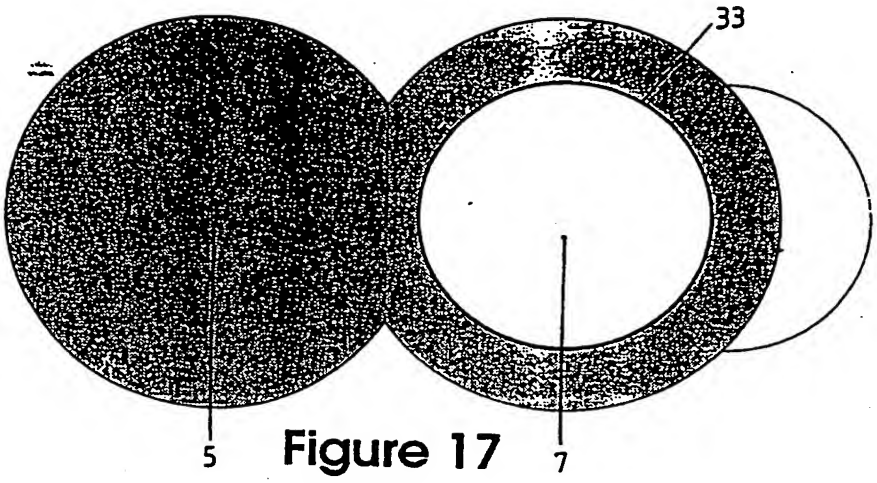

Figure 17

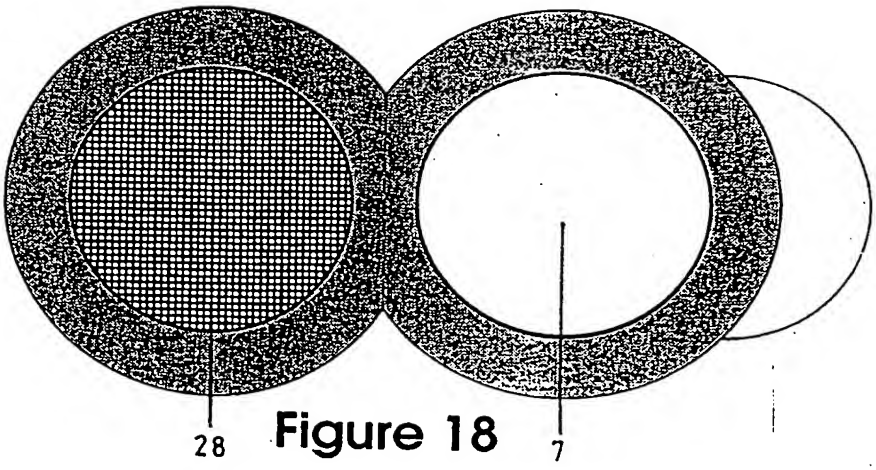

Figure 18

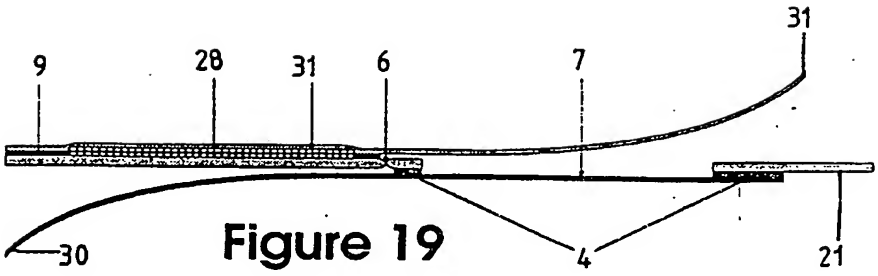

Figure 19

INTERNATIONAL SEARCH REPORT

Inter. ..nal Application No
PCT/NZ 94/00063

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A61F13/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 A61F A61D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US,A,5 086 763 (J.L.HATHMAN) 11 February 1992 see abstract; figures 1-2,6,8 see column 4, line 55 - line 56 ---	1-3,5,6, 8-11,15, 16, 19-22, 24,25, 43,46
X	FR,A,2 247 197 (MINNESOTA MINING AND MANUFACTURING) 9 May 1975 see page 2, line 11 - line 22; figures 2-4 --- -/--	1-3,7, 12,24, 28,43,46

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

1

Date of the actual completion of the international search	Date of mailing of the international search report
30 November 1994	19. 12. 94
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016	Authorized officer Nice, P

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Intern. ..onal Application No
PCT/NZ 94/00063

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP,A,0 352 086 (E.R.SQUIBB & SONS) 24 January 1990 see column 3, line 11 - line 23; figures 1,3	1-3,15, 16,19, 20, 22-28, 43,46
X	EP,A,0 401 893 (EASTMAN KODAK) 12 December 1990 see abstract; figures see column 3, line 15 - line 38	1,2, 14-16, 20,23, 26-28, 43,46
A	EP,A,0 368 264 (W.HOLZER) 16 May 1990 see abstract; figure 3	15,16
A	EP,A,0 509 281 (BEHRINGWERKE) 21 October 1992 see abstract see column 1, line 25 - line 30	17,18
A	EP,A,0 284 219 (SMITH AND NEPHEW) 28 September 1988 see figures	15,16,29

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/NZ94/00063

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [X] Claims Nos.: 30-42, 44-45
because they relate to subject matter not required to be searched by this Authority, namely:
Method for treatment of the human or animal body by therapy.
see PCT Rule 39.1 (iv)

2. [ ] Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. [ ] Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. [ ] As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. [ ] As all searchable claims could be searches without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. [ ] No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

[ ] The additional search fees were accompanied by the applicant's protest.

[ ] No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter. ..onal Application No
PCT/NZ 94/00063

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